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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,626	07/05/2000	ANDREAS MAIER	00114	2631

23338 7590 08/07/2003

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EXAMINER

TSAL, HENRY

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 08/07/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

14

Office Action Summary

Application No.

09/582,626

Applicant(s)

MAIER ET AL.

Examiner

Henry W.H. Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 18-40 in Paper No. 13 is acknowledged.
2. This application contains claims 1-17 drawn to an invention nonelected without traverse in Paper No. 13. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Specification

3. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Claim Objections

4. Claims 22, 37, and 38 are objected to because of the following informalities:

in claim 22, line 2, "350" should read -330--; and

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in claim 37, line 2, " 256'' " should read - 256''--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 21, 22, 28, 33-35, and 37- 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, line 1, "the basic body"; and line 2, "the rotational axis" lack proper antecedent basis since they were not defined previously.

In claim 28, lines 1-2, "the angle of the inclination of the clamping element" lacks proper antecedent basis since it was not defined previously.

In claim 33, lines 1-2, "the cutter and/or turning plate" lacks proper antecedent basis since it was not defined previously.

In claim 34, line 2, "the short limb" lacks proper antecedent basis since it was not defined previously.

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In claim 35, line 1, "the inclination"; and line 2, "the long limb" lack proper antecedent basis since they were not defined previously.

In claim 37, lines 4-5, "the inclined surface" lacks proper antecedent basis since it was not defined previously.

In claim 39, line 1, "the adjusting element" lacks proper antecedent basis since it was not defined previously.

In claim 40, line 2, "the basic body" lacks proper antecedent basis since it was not defined previously.

Applicant is required to review the claims and correct all language which does not comply with 35 U.S.C. § 112, second paragraph.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. 18, 20, 23-27, 30, 32, 34-36 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Kieninger (4,627,771) (Kieninger' 771).

Referring to claim 18, Kieninger' 771 also discloses, as claimed, a milling head having a body (1, see Fig. 2) and cutting inserts (comprising 6, 4, and 36, see Fig. 4) which can be adjusted in recesses (32, see Fig. 1), a clamping element (52, 53, see Figs. 2 and 9, and Col. 5, lines 52-62) disposed in a recess (50, see Fig. 2 and Fig. 9) for clamping purposes, wherein the cutting insert (comprising 6, 4, and 36, see Fig. 4) is positioned in a receiving part (32, see Fig. 1), and is fixed in its position by means of the clamping element (52, 53, see Figs. 2 and 9, and Col. 5, lines 52-62), characterised in that the clamping element is wedge shaped (the narrowed portion contact the surface of insert 36, see Fig. 9) having a receiving part (the surface of inert 36, see Fig. 9) and is received in its receiving part in a positive-fitting manner.

Referring to claim 20, Kieninger' 771 also discloses: the cutting insert can be adjusted by means of a wedge or screw (56, or 24, 25, see Fig. 2 and Col. 6, lines 62-68).

Referring to claim 23, Kieninger' 771 also discloses: a receiving part (50, see Fig. 4) for the clamping element (52 or

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53, see Fig. 4) is provided and the clamping element is disposed in a displaceable manner in said receiving part.

Referring to claim 24, Kieninger'771 also discloses: the receiving part (50, see Fig. 4) for the clamping element (52 or 53, see Fig. 4) crosses the receiving part (32, see Fig. 1) of the cutting insert (comprising 6, 4, and 36, see Fig. 4).

Referring to claim 25, Kieninger'771 also discloses: the cutting insert (comprising 6, 4, and 36, see Fig. 4) is provided with an inclination (46, see Fig. 4) on the side engaging with the clamping element (note the element 49 as shown in Fig. 4 is reasonably broadly interpreted as a clamping element).

Referring to claim 26, Kieninger'771 also discloses: the inclination (46, see Fig. 4) being formed at an angle of about 10°.

Referring to claim 27, Kieninger'771 also discloses: the clamping element (52 or 53 see Fig. 9) is provided with an inclination (the portion contacting the insert 36, see Fig. 9) on the side engaging with the cutting insert (comprising 6, 4, and 36, see Fig. 4).

Referring to claim 30, Kieninger'771 also discloses: a differential screw (56, or 24, 25, see Fig. 2 and Col. 6, lines 62-68) is provided for the purpose of adjusting the cutting insert (comprising 6, 4, and 36, see Fig. 4).

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Referring to claim 32, Kieninger'771 also discloses: the cutting insert (comprising 6, 4, and 36, see Fig. 4) comprises a turning plate (6, see Fig. 2) which is screwed to a carrier.

Referring to claim 34, Kieninger'771 also discloses: the cutting insert (comprising 6, 4, and 36, see Fig. 4) is L-shaped, wherein the cutter (6, see Fig. 2) is located in the front region of the short limb (4, see Fig. 2).

Referring to claim 35, Kieninger'771 also discloses: the inclination (46, see Fig. 4) is located on the long limb (36, see Fig. 4) .

Referring to claim 36, Kieninger'771 also discloses: the cutting insert (comprising 6, 4, and 36, see Fig. 4) comprising a rotatable cutting plate carrier (11, see Fig. 2) which supports the cutter (6, see Fig. 2).

Referring to claim 39, Kieninger'771's adjusting element (56, or 24, 25, see Fig. 2 and Col. 6, lines 62-68) is best reasonably and broadly interpreted as a conical screw since the front end thereof having a conical shape as shown in Fig. 2.

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kieninger'771 in view of Kieninger (US 4,964,763) (Kieninger'763).

Kieninger'771 discloses the claimed invention except for: the cutting insert being positioned in an eccentric bushing which is mounted in a positive-fitting manner.

Kieninger disclose a cutting tool comprising the cutting insert (8, see Fig. 2) being positioned in an eccentric bushing (17, see Fig. 4, and Col. 5, line 27) which is mounted in a positive-fitting manner.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kieninger'771's device to comprise the cutting insert being positioned in an eccentric bushing which is mounted in a

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positive-fitting manner, as taught by Kieninger'763, in order to facilitate the radial adjustment for the Kieninger'771's cutter.

10. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kieninger'771.

Kieninger'771 discloses the claimed invention except for: the angle of the inclination of the clamping element being smaller than the angle of the inclination of the cutting insert (claim 28); and the difference in the inclination angles being about 2° (claim 29).

However, it is well known in the art to use the angle of the inclination of the clamping element is smaller than the angle of the inclination of the object to be clamped such as a cutting insert as claimed in order to facilitate inserting the clamping element thereinto.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kieninger'771's device to comprise the angle of the inclination of the clamping element being smaller than the angle of the inclination of the cutting insert in order to facilitate inserting the clamping element; and the difference in the inclination angles being about 2° is just an alternate

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arrangement of the angles of the inclination of a clamping mechanism.

11. Claims 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kieninger'771 in view of Gupta (US 5,934,842).

Kieninger'771 discloses the claimed invention except for: the cutting insert comprising a cutter which is soldered on to a carrier(claim 31); and the cutter and/or turning plate consists of hard metal, cermet, ceramic, CBN, polycrystalline natural and synthetic diamond as a thin and thick film (claim 33).

Gupta disclose a cutting tool comprising the cutting insert (21, see Fig. 3) comprising a cutter (36, see Fig. 3, and Col. 4, lines 43-46) which is soldered on to a carrier(31, see Fig. 3); and the cutter and/or turning plate (36, see Fig. 3) consists of hard metal, cermet, ceramic, CBN, polycrystalline natural and synthetic diamond as a thin and thick film (37, see Fig. 3, and Col. 4, lines 43-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kieninger'771's machine to comprise the cutting insert comprising a cutter which is soldered on to a carrier; and the cutter and/or turning plate consists of hard metal, cermet,

ceramic, CBN, polycrystalline natural and synthetic diamond as a thin and thick film, as taught by Gupta, in order to increase the securing strength between the cutter and the carrier of the Kieninger'771's tool, and to increase the cutting life of the Kieninger'771's cutter.

12. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kieninger'771 in view of Allemann (US 4,929,131).

Kieninger'771 discloses the claimed invention except for: a cooling arrangement being provided in the basic body.

Allemann discloses a machine tool comprising a cooling (42, see Fig. 3, and Col. 3, lines 31-35) arrangement being provided in the basic body.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kieninger'771's tool to comprise a cooling arrangement being provided in the basic body, as taught by Allemann, in order to facilitate cooling the Kieninger'771's cutter for it's longer cutting life.

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Allowable Subject Matter

13. Claims 21, 22, 37 and 38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: Kieninger'771, the closest reference, does not teach or fairly suggest a milling head comprising the basic body provided with a receiving bore at an angle with respect to the rotational axis of the milling head, in which an adjusting bushing for the cutting insert is positioned (claim 21); and the cutting insert supporting a movable cutting plate, against which lies one end of a pin body which impinges at an angle, wherein the pin body exerts pressure outwardly against the cutting plate and lies with its other end against the inclined surface of an adjusting element (claim 37).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Contact Information


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (703) 308-7600. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Eddie Chan, can be reached on (703) 305-9712. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **TC 2100 receptionist whose telephone number is (703) 305-3900.**

17. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into **the Group at fax number:**

Official faxes: 703-746-7239; and

After Final faxes: 703-746-7238.

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HENRY W. H. TSAI
PRIMARY EXAMINER

August 2, 2003